

Measles, mumps, rubella and the MMR vaccine

- Measles, mumps and rubella are infectious viral diseases.
- Most people recover from these diseases, but there is a risk of hospitalisation, long-term complications or even death.
- Antibiotics will not treat these infections as they are caused by viruses.

What are the symptoms?

Measles: Fever, cough, runny nose, sore red eyes followed by a rash that starts on the face or neck and spreads to the rest of the body.

Mumps: Fever, headache, muscle aches, tiredness, and loss of appetite followed by painful swelling of the salivary glands on one or both sides of the face, cheeks or jaw.

Rubella: Fever, tiredness, runny nose, sore throat, and swollen neck glands followed by a rash that starts on the face and spreads to the rest of the body.

Some people may not be aware they are infected with these diseases because they have mild or no symptoms. They can therefore spread the illness without realising.

How are measles, mumps and rubella spread?

- They are spread by an infected person's saliva or mucous from coughing, sneezing or talking. They can also be spread via face-to-face contact, or by touching an object such as a used tissue or keyboard, infected with droplets.
- Measles can also be caught by breathing the same air as an infected person, such as sitting next to them on the bus.

Who has immunity to measles, mumps or rubella?

- People develop immunity to measles, mumps and rubella either by catching the disease or being vaccinated with the measles-mumps-rubella (MMR) vaccine.
- People are considered fully immune to measles, mumps and/or rubella if:
 - They were born before 1969 (measles), born before 1970 (rubella) or born before 1981 (mumps)
 - They have been previously diagnosed and recovered from measles, mumps or rubella, or
 - They have received two documented doses (recorded in a Well Child/Tamariki Ora or Plunket book, or with their GP practice) of the MMR vaccine after their first birthday¹.

¹ For measles only, 95% of people will be immune after one dose of MMR.

- Only the MMR vaccine or being born before 1969 provides immunity to all three diseases.

How can immunisation prevent an outbreak of measles, mumps or rubella?

- Immunisation with the MMR vaccine is the best way to protect against measles, mumps and rubella.
- Two doses of MMR are 99% effective at preventing measles, 88% effective for mumps and 97% for rubella.
- The speed at which the infection can spread in the community is directly related to the number of people who are not immunised. Measles, mumps and rubella will not spread if enough people are immunised. This is called 'herd immunity'.
- Vaccination protects individuals and their families and prevents the spread of disease in the community. It also protects those who can't be vaccinated, such as children and adults with weakened immune systems.

Vaccination with the MMR vaccine

- The MMR vaccine is an injection to vaccinate people against measles, mumps and rubella.
- Children should routinely receive the MMR vaccine at 15 months and four-years-old. In an outbreak, this timing may change.
- Anyone aged between one and 50 years who does not have two documented doses of MMR vaccine is eligible for free vaccines.
- Where possible, women should avoid pregnancy for one month after having an MMR vaccine.

Who should **not** receive the MMR vaccine?

- Babies younger than 12 months
- Pregnant women
- Those allergic to components of the MMR vaccine i.e. gelatin or the antibiotic neomycin.
- People with medical conditions or taking medication that can cause a weakened immune system, including:
 - transplant patients
 - those with illnesses such as HIV
 - cancer patients receiving chemotherapy or radiotherapy
 - people taking high-dose steroid or immune suppressive medication.

These people should speak with their doctor.

People with an egg allergy, including anaphylactic egg allergy, **can safely have** the MMR vaccine.

Possible side effects of the MMR vaccine

- The MMR vaccine has an excellent safety record so most people will have no side effects.
- Side effects are few and usually mild, compared with the serious consequences of having measles, mumps or rubella. They can include fever, mild rash, joint pains, mild swelling on the side of the face, cheeks, jaw or neck.
- Fits caused by having a fever (febrile convulsions) happen in about one in every 3,000 infants around 6-12 days after receiving a MMR vaccine. Febrile convulsions do not cause any long term harm.
- Approximately one child in a million develops encephalitis (inflammation of the brain) after receiving the MMR vaccine. But if an unimmunised child catches measles the chance of developing encephalitis is much higher: one in 1000.

For more information

- Auckland Regional Public Health Service: www.arphs.health.nz
- Ministry of Health: www.health.govt.nz
- Immunisation Advisory Centre: www.immune.org.nz (0800 466 863)

If you suspect measles, mumps or rubella, call your doctor or freephone Healthline (**0800 611 116**) for advice. Healthline operates 24/7, with translators available.

Last updated June 2019